Abstract

The invention relates to a method for determining the humidity and/or density of a dielectric material in a resonator that is filled with said material and that contains a transmitter and a receiver. According to said method: the transmitter emits a signal; a resonance curve of the filled resonator is scanned in stages, whereby respective signal intensity values (U_i) are measured at different frequencies (f_i); the resonant frequency (f_{rm}) and the bandwidth (BW_m) are determined for the filled resonator from measured points (f_i/U_i); and the humidity (ψ) and/or deinsity (ρ) of the material are calculated by solving a second system of equations (G2), containing the resonant frequencies (f_{r0}, f_{rm}) and bandwidths (BW_0, BW_m) of the empty and filled resonators and known calibration co-efficients (a_{r1}, a_{r2}, b_{r1}, b_{r2}, c_{r1}, c_{r2}, a_{bw1}, a_{be2}, b_{bw1}, b_{bw2}, c_{bw1}, c_{bw2}) of said resonator. The aim of the invention is to provide a method for determining the humidity independently of the density in a rapid, precise manner.